

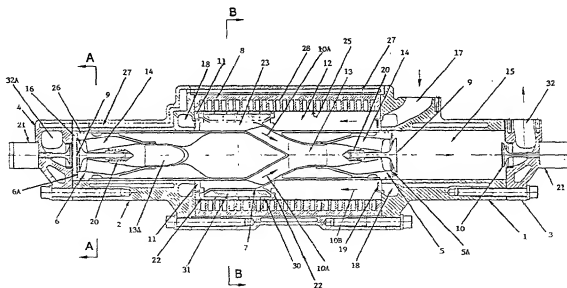
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(54) Title: FRRE-PISTON INTERNAL COMBUSTION ENGINE WITH VALVES LOCATED IN PISTONS



(57) Abstract: A free-piston internal combustion engine comprises at least one pair of longitudinally opposed cylinders (1, 2) with an electricity generating stator (8) fixed thereto. Respective pistons (5, 6) are arranged in the cylinders (1, 2) for cycles of reciprocating compression and power strokes. There are inlet valves (9) for introducing air or fuel mixture into the cylinders (1, 2) prior to the compression stroke. There is an outlet valve (10) for the expulsion of exhaust gas following the power stroke. The pistons (5, 6) are linked together with a linear actuator (7) for movement. During operation of the engine the reciprocating strokes of the pistons (5, 6) and linear actuator (7) with respect to the stator (8) generate useable electrical energy. The inlet valve (9) is located in the pistons (5, 6) and comprise a portion of the piston heads.

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